Cracking the RRSP nest egg

Ted Wannell

registered retirement savings plan (RRSP) constitutes a key component of retirement income planning in Canada. RRSPs allow individuals to save pre-tax dollars in a variety of investment instruments wherein interest, dividends and capital gains accrue tax free until the funds are withdrawn. RRSPs work in conjunction with employer-provided registered pension plans (RPPs) to supplement the basic public pension plans: Old Age Security and Guaranteed Income Supplement (OAS/GIS), and the Canada and Quebec Pension Plans (C/QPP).

The tax-sheltering features of RRSPs have made them very popular investment vehicles, heavily promoted by the financial services industry. As of 1999—the last year a comprehensive wealth survey was conducted—half of all families and unattached individuals held RRSPs totalling \$343 billion. This accounted for 9.8% of all household assets, following principal residences (31.5%), employer pension plans (17.3%), and business equity (10.1%). The foregone tax revenue on RRSP deductions and the income generated by this wealth is estimated to be more than 1% of GDP annually—about \$10 billion (Canada 2004).1

However, the taxman will eventually receive his due. RRSPs must be converted into an annuity or a registered retirement income fund (RRIF) in the year the taxpayer turns 69, with prescribed minimum withdrawals starting the following year. Income tax is then paid at the applicable marginal rate. The basic planning assumption is that this rate will probably be lower than when the contributions were made, since income is generally lower after retirement. Nonetheless, RRSP withdrawals already generate significant tax revenues—estimated at over \$4 billion in 2002 (Canada 2004).

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These should continue to grow rapidly, given the aging of the population, the increasing wealth held in RRSPs, and the characteristics of RRSP investors.

Past research on RRSP contributors found employees belonging to registered pension plans (RPPs) far more likely to contribute than those without pension plans (Akyeampong 1999). Although subsequent research indicated that the elevated contribution rates of RPP members had more to do with other personal and job characteristics (Palameta 2001, 2003), the fact remains that 60.4% of RRSP contributors can count on collecting employer pensions on top of OAS/GIS and C/QPP benefits. Moreover, those with at least some RPP assets held 62.8% of the RRSP wealth in 1999. These facts would indicate that much of the income stream flowing out of RRIFs will be taxed at relatively high marginal rates.

Some financial writers have taken note of the downstream tax consequences of RRSP investing (for example, Cestnick 2003), pointing out that at some juncture it becomes more advantageous for a highincome earner to invest in non-registered instruments. Two factors need to be considered: Capital withdrawals from non-registered instruments are not subject to income tax (unlike with RRIFs), and some forms of investment income (notably dividends and capital gains) are taxed at lower rates.

Other commentators have questioned the wisdom of RRSP saving at the lower end of the income spectrum (for example, Shillington 2003; Hamilton 2001), arguing that current-year deductions are negligible for most low-income earners, whose marginal income tax rates are low or even zero. More importantly, if their savings do grow to the extent that they could provide a significant stream of income in retirement, much of that extra money would be clawed back from meanstested income support programs (OAS/GIS) or other social benefits (such as subsidized housing).

These issues have spawned proposals for an alternate form of registered saving: tax pre-paid accounts (Poschmann and Robson 2004). Such accounts, referred to as Roth plans in the United States, offer no deduction for contributions, but tax-free withdrawals in retirement. Proponents argue that such plans could solve some of the retirement savings dilemmas of both high- and low-income workers.

For a topic of interest to many groups—policy-makers, financial planners, individual savers, and those marketing goods and services to seniors—precious little hard information is available on RRIF income. That void can be partially filled by exploiting the Longitudinal Administrative Databank (LAD), the largest available source for RRSP-generated income, to document the apparent size of the mandatory conversion effect and its differential impact across the income spectrum and various groups of interest (see Data source and definitions).

Some bumps in the road

The ideal data source for RRSP-generated income would have several attributes:

- details on all the different types of RRSP-generated income—withdrawals, pre-age-69 annuities, mandatory conversion annuities, and RRIF withdrawals
- information on all other sources of income
- individual and family characteristics

- · multiple years of data
- a sample large enough to allow robust inferences regarding relatively small, specific groups

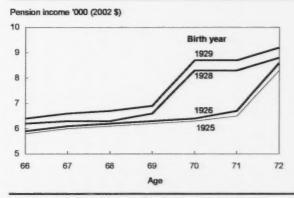
Currently, no sample survey comes close to meeting all these criteria. However, the LAD—an amalgam of income tax and other information—provides enough information and a large enough sample to examine the impact of mandatory conversion.

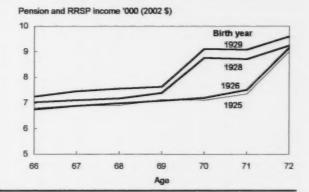
Its main shortcoming is the compression of RRSP-generated income into two variables: T4RSP income, and pension income (PI). The former includes direct withdrawals from RRSPs and income from RRSP-financed annuities. Combining these two represents very little loss of specificity since both are fully RRSP-financed. On the other hand, PI includes RRIF-generated income and income from employer pension plans (C/QPP income is recorded separately). However, the longitudinal nature of the data allows an approximation of the mandatory conversion effect by looking at the change in PI from age 69 to age 70, where the effect is clearly observable.

Since the tax effects of mandatory conversion are also of interest, changes to the federal and provincial income tax codes introduce another confounding factor. A series of reductions to the federal marginal tax rates was announced in 1999, potentially making it difficult to untangle the impact of mandatory conversion on effective tax rates. Fortunately (for taxpayers and this analysis), the rate reductions were accelerated

Chart A Mandatory conversion causes a sharp increase in T4 pension income ...

... which is partially offset by the drop in RRSP withdrawals.





Source: Longitudinal Administrative Databank, 2001-2002

between the 2000 and 2001 tax years, leaving rates stable between 2001 and 2002, the focus of much of the analysis.²

Mandatory conversion provides income boost

The effects of mandatory conversion can be seen in PI, which shows a significant jump at age 70 in recent years and at age 72 before the mandatory conversion age was lowered for the 1997 tax year (Chart A). Average PI typically increases by about 25% (about \$1,800) at the time of conversion.

However, looking solely at PI overestimates the income effect of mandatory conversion since T4RSP income (from RRSP withdrawals and RRSP-generated annuities) falls by about \$300 at the same time. So the net effect is closer to \$1,500.

RRSP-generated income has been rising across birth cohorts, indicating that RRSP assets are increasing for younger cohorts relative to older ones. What is not immediately obvious is that annuity income after age 69 (residual T4RSP income) has been declining across cohorts, indicating a trend towards managing assets within RRIFs rather than exercising the annuity option at mandatory conversion.

Average mandatory conversion effect is small in relation to total income

Among seniors, income generally declines with age. Employment income falls due to both declining employment rates and fewer working hours among those who continue to hold jobs. The real value of private pension income may fall for those with non-indexed pensions. And, investment income may also decline as seniors draw down their assets.

To illustrate, mandatory conversion provided a net boost of about \$1,600 for 70 year-olds in 2002, equivalent to 6.6% of their 2001 income (Table 1). However, their taxable income increased by only \$800 (3.2%). So the boost from mandatory conversion represents a temporary upward shift in a generally declining againcome profile for seniors.

These findings also give a first glimpse of the tax consequences of mandatory conversion. Average taxes paid increased from \$4,000 in 2001 to \$4,200 in 2002. This increase (about \$40 million for the entire cohort) is the lower bound of the taxation boost fuelled by mandatory conversion.³ Although the increase in taxes

Table 1 Income change at mandatory conversion for all taxfilers

2001 Age 69	2002 Age 70
\$	
24,900	25,700
7,000	9,000
700	350
17,200	16,350
4,000	4,200
16.1	16.3
	24,900 7,000 700 17,200 4,000

Source: Longitudinal Administrative Databank

paid nudges the average tax rate only from 16.1% in 2001 to 16.3% in 2002, it represents an effective tax rate of 25.0% on the \$800 increase in taxable income.

Mandatory conversion effect increases with income

Previous research has shown, not surprisingly, that high-income earners contribute more to RRSP accounts and accumulate more RRSP wealth. Since they are also more likely to have registered pension plans and other financial assets, high-income earners may have little need to withdraw from their RRSP accounts prior to mandatory conversion. These factors should combine to produce a much stronger mandatory conversion effect, which is indeed the case.

Dividing 69-year-old taxfilers into five equal groups sorted by income shows that the percentage within each quintile who experienced more than a \$2,400 increase in PI from age 69 to age 70 rises steadily from 5% in the lowest quintile to 56% in the top (Chart B).

The situation is similar if a relative, as opposed to absolute, increase in income is used as the measure. Just 3% of the bottom quintile experienced more than a 5% increase in income at age 70, compared with 43% in the top quintile. Clearly, income matters in terms of mandatory conversion, indicating that much of the outflow from RRSPs will be taxed at relatively high marginal rates.

Data source and definitions

The Longitudinal Administrative Databank (LAD) is based on a 20% sample of T1 tax records. The charts in the article focus on all individuals who filed valid returns in the stated age and year combinations. The tables are based on approximately 202,000 individuals whose 69th birthday fell in 2001 and who filed valid returns in 2001 and 2002. This pair of years was chosen since minimal changes in federal tax rates occurred then. The marginal rate boundaries for federal income tax were adjusted for inflation, and income items in this study have been adjusted accordingly (to 2002 dollars). Other recent year pairs yielded similar results for income items, but the tax results were more variable because of changes to the federal marginal rates.

Registered retirement savings plans (RRSPs) are for individuals, including the self-employed. They are registered for purposes of the federal *Income Tax Act*. Contribution limits are based on earned income and the presence of any employer-sponsored pension plan. An RRSP's value is based on accumulated contributions and return on investment. Contributions are tax-deductible and the investment income is tax-deferred, but withdrawals are taxable.

Registered retirement income funds (RRIFs) are for individuals, established at financial institutions, and registered under the *Income Tax Act*. They are meant to provide income in retirement. RRIFs are established by transferring monies directly from RRSPs or registered pension plans. Withdrawals from a RRIF are taxable. A minimum amount must be withdrawn each year, beginning the year after the RRIF is established.

The Canada and Quebec Pension Plans (C/QPP) are contributory, earnings-related, social insurance programs that ensure a measure of income protection for contributors and their families against the loss of income due to retirement, disability or death.

Old Age Security (OAS) is a taxable monthly payment to Canadians 65 and older, based on years of residency in Canada. The Guaranteed Income Supplement (GIS) is a non-taxable benefit paid to lower-income OAS recipients. Both are income-tested and can be clawed back as income increases.

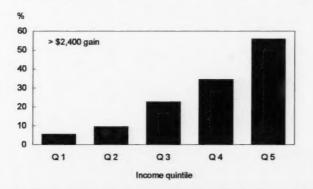
Registered pension plans (RPPs) are sponsored by employers or unions and usually funded through contributions by both employees and employers. RPPs must satisfy certain conditions and be registered for purposes of the federal *Income Tax Act*. Contributions to RPPs are tax-deductible and their investment income is tax-deferred, but payments from them are taxable.

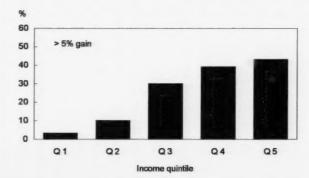
The effective average tax rate is the ratio of taxes paid to taxable income. This is also referred to as the ratio of averages or aggregate tax rate.

The marginal tax rate is not used since it connotes the tax rate on the highest dollar of income at the individual level—a figure not calculated here. Moreover, it may imply that clawbacks have been accounted for. As long as the taxes paid remain at zero (fairly common for low-income seniors), clawback effects will not be observed with the effective average tax rate calculation (see Means testing for OAS and GIS).

(Definitions have been adapted from the Department of Finance glossary of frequently used terms. Internet: www.fin.gc.ca/gloss/gloss-e.html.)

Chart B The effects of mandatory conversion increase with income in both absolute and relative terms.





Source: Longitudinal Administrative Databank, 2001-2002

Groups of interest

While financial planners may promote investment strategies that apply to broad cross-sections of the population, the circumstances of the individual must be considered. For some, commentators have questioned the merit of RRSPs; for others, RRSP income is inherently an important part of their retirement income. These two groups inhabit mainly the high and low ends of the income spectrum.

Seniors reliant on public pensions

The evolving public pension system—comprising OAS/GIS and the C/QPP—has been instrumental in raising the average income of seniors, keeping many above the low-income cutoff line (Myles 2000). At the same time, many seniors have become increasingly reliant on these payments, which now account for a greater proportion of seniors' income than in the past.

As noted, RRSPs are a less tax-efficient strategy for low-income earners since the tax breaks associated with both the initial investment and the investment

Table 2 Mandatory conversion and reliance on C/QPP and OAS/GIS

	2001 Age 69	2002 Age 70
Over 75% of income (32.3%) Total taxable income Pension income T4RSP income All other	9,400 370 110 8,920	\$ 9,900 820 70 9,010
Taxes paid Effective tax rate (%)	110 1.2	170 1.7
50% to 75% of income (23.3%) Total taxable income Pension income T4RSP income All other	17,500 3,900 550 13,050	18,200 5,200 240 12,760
Taxes paid Effective tax rate (%)	1,100 6.3	1,300 7.1
Less than 50% of income (44.4%) Total taxable income Pension income T4RSP income All other	40,100 13,500 1,200 25,400	41,200 16,900 610 23,690
Taxes paid Effective tax rate (%)	8,300 20.7	8,600 20.9

Source: Longitudinal Administrative Databank

growth are relatively small, given the progressive nature of the income tax system. Many low-income earners pay no tax and even more pay at very low marginal rates (Table 2). RRSP savings thus provide them with little in the way of tax relief, while the downstream withdrawals may affect means-tested social benefits such as the OAS/GIS (see Means testing for OAS and GIS).

In 2001, nearly a third of 69 year-olds (32.3%) were reliant on public pensions for at least three-quarters of their total income. One in five of these individuals had some PI in that year, averaging \$1,800. After mandatory conversion, almost a third (31.8%) collected PI averaging \$2,600. Although average effective tax rates were very low among those reliant on public pensions, 1.2% in the year they turned 69, the rate rose to 1.7% the following year—an effective tax rate of 12.0% on the increased income after mandatory conversion.

If the population is further limited to those almost entirely reliant on OAS/GIS, the effective tax rate is 0% for each year, even though small proportions do collect some PI (1.7% at age 69 and 5.9% at age 70).

Means testing for OAS and GIS

OAS is a residency-based, taxable social benefit for those 65 and older. It is intended as a base level of income support for seniors and is clawed back only at quite high levels of individual income. During the final quarter of 2002, the maximum monthly OAS benefit was \$449. At that time, benefits were reduced by 15 cents per dollar of annual income in excess of \$56,968.

The GIS is a non-taxable benefit targeted specifically to low-income seniors. In the final quarter of 2002, it paid a maximum of \$534 to those living alone or \$348 to each spouse in a senior couple. An allowance is available for spouses or widowed spouses (aged 60 to 64) of GIS recipients.

The GIS and Allowance are clawed back at much higher rates than the OAS. The GIS is reduced by 50 cents for every dollar of non-OAS income. The Allowance consists of both an OAS and a GIS component; the OAS component is reduced by 75 cents per dollar, the GIS component by 50 cents.

The means testing of other social benefits, such as rent subsidies and provincial drug benefits, could conceivably result in situations where the tax-back rate on RRSP-generated income approaches or exceeds 100%. In other words, RRSP income could make some low-income seniors less well off. In addition, high clawback rates are a disincentive for low-income seniors to participate in the labour market, since the added earnings may not result in net financial improvement.

One would expect to see some reduction in average OAS/GIS corresponding to an increase in PI, but the small amounts involved (\$50 on average) may be offset by, for example, a small increase in the percentage receiving the GIS (Table 3).

Some small declines in OAS/GIS were evident among those with somewhat less reliance on this program (for whom it represented between 50% and 90% of total income—data not shown). For these individuals, mandatory conversion coincides with an average increase of \$200 to \$300 in total income and an average loss of \$100 in GIS. This corresponds to the GIS tax-back rate of 50%. Rough calculations indicate that this situation could affect up to 1 in 20 seniors at mandatory conversion.⁴

Table 3 Mandatory conversion and reliance on OAS/GIS

	2001 Age 69	2002 Age 70
90% and over of income (4.4) Total taxable income	%)	\$ 5,000
Pension income T4RSP income All other	20 10 4,770	90 10 4,900
Taxes paid Effective tax rate (%)	0	0
70% to less than 90% of inco	ome (8.7%)	
Total taxable income Pension income T4RSP income All other	6,300 70 50 6,180	6,500 220 30 6,250
Taxes paid Effective tax rate (%)	10 0.2	30 0.5
50% to less than 70% of inco	ome (12.6%)	
Total taxable income Pension income T4RSP income All other	9,900 370 150 9,380	10,200 790 50 9,360
Taxes paid Effective tax rate (%)	50 0.5	100
Less than 50% of income (74.	3%)	
Total taxable income Pension income T4RSP income All other	30,900 9,400 920 20,580	31,800 11,900 460 19,440
Taxes paid Effective tax rate (%)	5,400 17.5	5,600 17.6

Source: Longitudinal Administrative Databank

Substantial employer pensions

At the other end of the spectrum are seniors with employer pensions exceeding their combined C/QPP and OAS/GIS. Just one in five 69 year-olds fit this definition, and their average income was more than double that of the other 80%—\$43,000 compared with \$20,200 (Table 4). At mandatory conversion, average PI for this group increased by \$2,400 (\$1,860 after accounting for the drop in RRSP withdrawals). This compares with a \$1,900 increase (\$1,580 netting out RRSP withdrawals) for the remaining population. So mandatory conversion does not have a disproportionate effect on those with substantial employer pensions.

Tax rates may be more of a concern to higher-income seniors, such as those with significant pension benefits. With their greater income, those with substantial pension benefits pay taxes at a higher average rate than other seniors, 20.5% versus 13.9%. The average tax remained the same for both groups at age 69 and 70, with only slightly higher average rates on the increase in average income.

Early RRSP withdrawers

Significant RRSP withdrawals prior to mandatory conversion may be an indicator of seniors who have not saved adequately to match their spending habits.

Table 4 Mandatory conversion and significant employer pensions

	2001		2002 Age 70
	Age 69		
T4 pension income less that to C/QPP + OAS/GIS (79.8		\$	
Total taxable income	20,200		20,900
Pension income	2,300		4,200
T4RSP income	610		290
All other	17,290		16,410
Taxes paid	2,800		2,900
Effective tax rate (%)	13.9		13.9
T4 pension income larger (C/QPP + OAS/GIS (20.5%)			
Total taxable income	43,000		44,300
Pension income	25,100		27,500
T4RSP income	1,100		560
All other	16,800		16,240
Taxes paid	8,800		9,100
Effective tax rate (%)	20.5		20.5

Source: Longitudinal Administrative Databank

Alternatively, these withdrawals could be a gauge of high levels of RRSP wealth being drawn down to smooth income and taxes across one's remaining years. It could also be that some seniors are drawing down RRSPs before age 69 to avoid GIS or OAS clawbacks. Each argument finds some support in the data.

Very few 69 year-olds relied on RRSP withdrawals for more than a quarter of their income, just 2.4% (Table 5). Their average withdrawal of \$11,300 boosted mean taxable income to \$29,500. However, mandatory conversion coincided with a drop of \$8,000 in RRSP withdrawals and only a \$5,400 increase in PI. Tallying up all sources, their total income actually dropped by \$1,400 after mandatory conversion. For this group, then, the conversion process may serve as a signal to curb spending.

Those who withdrew more moderate sums from their RRSP prior to conversion better fit the mould of income smoothers. For the one in five 69 year-olds whose RRSP withdrawals made up 25% or less of their income, very small increases in total income (from

Table 5 Mandatory conversion and RRSP withdrawals

	2001 Age 69	2002 Age 70
Over 25% of income (2.4%)		\$
Total taxable income	29,500	28,100
Pension income	5,800	11,200
T4RSP income	11,300	3,300
All other	12,400	13,600
Taxes paid	4,900	4,200
Effective tax rate (%)	16.6	14.9
Over 0% to 25% of income (20.4	1%)	
Total taxable income	28,800	29,000
Pension income	10,100	12,300
T4RSP income	2,100	760
All other	16,600	15,940
Taxes paid	4,500	4,500
Effective tax rate (%)	15.6	15.5
No withdrawal (77.2%)		
Total taxable income	23,800	24,800
Pension income	6,200	8,000
T4RSP income	0	150
All other	17,600	16,650
Taxes paid	3,800	4,100
Effective tax rate (%)	16.0	16.5

\$28,800 to \$29,000) coincided with mandatory conversion, along with a small decline in taxes paid. In comparison, those with no RRSP withdrawal at age 69 experienced a \$1,000 rise in total income (from \$23,800 to \$24,800) and a corresponding rise in their average tax rate.

Senior workers

Another strategy for those who have not saved enough for a comfortable retirement is to continue working past age 65. But the GIS clawback likely provides an employment disincentive to many low-income seniors. Overall, just one in eight 69 year-olds relied on employment or self-employment earnings for at least a fifth of their income, and only one in twenty-five earned enough to account for more than 60% of total income (Table 6). And the income profile of these older workers suggests that many are self-employed professionals who likely do not have substantial employer pensions.

The 69 year-olds who earned more than 60% of their total income from employment brought in an average of \$78,400 from all taxable sources in 2001—of which only \$2,200 came from PI. These individuals experienced a huge increase in PI after mandatory conversion, more than quadrupling to \$9,600. Although other sources of income drop somewhat, their average total income still increased by \$5,100, adding \$1,500 to their tax bill.

Seniors who rely less on employment income generally have lower taxable income, but higher levels of pension income prior to mandatory conversion. Those who earned between 20% and 60% of their taxable income from employment averaged \$35,600 in total income. This dropped to \$21,500 for those who counted on employment for less than a fifth of their total income (the vast majority of 69 year-olds). Despite their lower total income, these seniors did have higher levels of PI (\$7,400) at age 69 than those who worked more. Those who continued to work, however, had greater RRSP savings, since mandatory conversion corresponds with greater increases in PI for senior workers. As a result, all three groups had similar levels of PI at age 70.

Conclusion

RRSPs are tax-advantaged savings vehicles that constitute the third pillar of the retirement income system in Canada, the other two being public pensions (OAS/GIS and C/QPP) and registered pension plans

Source: Longitudinal Administrative Databank

Table 6 Mandatory conversion and senior workers earnings

	2001 Age 69		2002 Age 70
Over 60% of income (3.9%)		s	
Total taxable income	78,400	•	83,500
Pension income	2,200		9,600
T4RSP income	760		740
All other	75,440		73,160
Taxes paid	24,600		26,100
Effective tax rate (%)	31.4		31.3
Over 20% to 60% of income (8	.7%)		
Total taxable income	35,600		36,000
Pension income	5,600		9,400
T4RSP income	910		460
All other	29,090		26,140
Taxes paid	6,800		7,000
Effective tax rate (%)	19.1		19.4
20% or less of income (87.4%)			
Total taxable income	21,500		22,100
Pension income	7,400		8,900
T4RSP income	680		320
All other	13,420		12,880
Taxes paid	2,800		2,900
Effective tax rate (%)	13.0		13.1

Source: Longitudinal Administrative Databank

through an employer. RRSPs are converted into income by way of direct withdrawals or conversion to annuities or RRIFs. RRSPs must be converted into annuities or RRIFs in the calendar year of the holder's 69th birthday, with minimum withdrawals mandated for subsequent years.

Mandatory conversion provided an average income boost of about \$1,600 for 70 year-olds in 2002, at a time when other sources of income are generally declining. Since RRIF income is taxed at an individual's marginal rate, the income raises the average effective tax rate and total taxes paid by 70 year-olds. However, this is the basic covenant of the system: RRSP deposits are deducted from taxable income in the year they are made and compound tax free, while withdrawals are likely to occur at lower levels of income and marginal tax rates in retirement.

Of course, no system is perfect for all people. Commentators have noted that RRSPs may not be the most appropriate retirement vehicle for people at the extreme high or low end of the income spectrum. High-income earners are much more likely to have significant income gains coincident with mandatory conversion, with such gains being taxed at relatively high effective rates. As for low-income earners, a small percentage lose some of their GIS entitlement as a result of RRIF income coming on stream. Some analysts have proposed tax-prepaid retirement savings accounts to fit the needs of these groups. Alternatively, sound financial planning could help to optimize savings and income under the current regime.

Very few individuals currently rely on RRSP-generated income for a significant proportion of their income prior to their 70th birthday. Even after mandatory conversion, RRIFs and RRSP-generated annuities account for less than 10% of total income. In absolute terms, seniors who continue earning substantial employment income at age 69 do experience large mandatory conversion effects, but these are generally high-income individuals whose average RRSP-generated income barely surpasses the 10% threshold.

The mandatory conversion effect has been increasing over time, indicating that successive cohorts of Canadians have higher and higher levels of RRSP saving. Other research indicates that employers may increasingly be offering group RRSPs as an alternative to traditional registered pension plans (Morissette and Drolet 2001). These trends indicate that RRSP wealth is likely to become a more important component of seniors' income in the future. As such, data development to provide more precise information on RRSP-generated income merits serious consideration. Further research is also required to better identify the distributional, as opposed to the average, effects within subgroups of particular interest to policy-makers and the financial planning community.

Perspectives

■ Notes

- 1 The 1% of GDP estimate represents a long-term rule of thumb since annual estimates of the foregone taxes are highly variable. The most volatile element is the foregone revenue on capital gains and investment income from RRSP wealth. This component is correlated with financial market swings. The other main component is income tax deductions for annual RRSP contribution. This component is correlated with the inflows to RRSP accounts and marginal tax rates.
- 2 The bracket boundaries were adjusted upward in 2002 to account for inflation, but all income reported in this article has also been adjusted for inflation.

- 3 The upper bound would be approximately double the lower bound considering the net income increase of \$1,600 related to mandatory conversion. Since the income boost might cause some seniors to work fewer hours (earning less employment income) than would otherwise be the case, this 'substitution effect' would place the true tax revenue effect of mandatory conversion somewhere between the two bounds.
- 4 The maximum potential proportion experiencing a GIS clawback should be roughly equal to the proportion of the population in the categories experiencing a decline in average GIS payments times the proportion of those categories with non-zero PI at age 70.

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